

Please amend the claims as follows:

1. (Amended) A vertical turbine pump comprising:

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a pump bowl assembly including a casing having a bulbous diffuser section between axially opposed upstream and downstream sections which are narrower than said diffuser section;

at
a bulbous diffuser core disposed centrally in said casing diffuser section;

a drive shaft extending centrally and axially through said diffuser core;

a rotary impeller fastened to an end of said drive shaft and disposed in said casing upstream section adjacent a fluid inlet, said impeller incorporating flared shrouds which are axially spaced from each other and spirally oriented impeller vanes disposed between said shrouds and spaced from each other equiangularly about the axis of impeller rotation;

three stationary diffuser vanes spaced equiangularly about said diffuser core, said diffuser vanes extending laterally between said diffuser core and said casing and having upstream ends which curve about said diffuser core and downstream ends which extend generally axially through said casing downstream section; and

B¹
a bearing cartridge separably fastened within said diffuser core, said bearing cartridge carrying axially spaced bearings which surround and rotatably support said drive shaft,

A⁺
said bearing cartridge being removable from an upstream section of said casing by removing said impeller and disengaging said bearing cartridge from said casing thereby permitting said bearing cartridge to be slid off said drive shaft in an axial direction.

A²
6. (Amended) In a vertical turbine pump incorporating a pump bowl assembly including a casing having a bulbous diffuser section between axially opposed upstream and downstream sections which are narrower than said diffuser section, a bulbous diffuser core disposed centrally in said casing diffuser section, a drive shaft extending centrally and axially through said diffuser core and a rotary impeller fastened to an end of said drive shaft and disposed in said casing upstream section adjacent a fluid inlet, the improvement comprising:

a bearing cartridge separably fastened within said diffuser core;

said bearing cartridge carrying axially spaced bearings which surround and rotatably support said drive shaft,

said bearing cartridge being removable from an upstream section of said casing by removing said impeller and disengaging

A2
said bearing cartridge from said casing thereby permitting said bearing cartridge to be slid off said drive shaft in an axial direction.

Please amend the following reissue claims relative to the original patent claims as follows:

15. A vertical turbine pump/comprising:

a pump assembly including a casing;

a diffuser core disposed in said casing;

a drive shaft extending through said diffuser core;

A3
a rotary impeller fastened to an upstream end of said drive shaft; and

a bearing cartridge including an elongated housing having a bearing disposed therein,

said bearing cartridge separably fastened to said casing,

said bearing surrounding and rotatably supporting said drive shaft,

said bearing cartridge being removable from an upstream section of said casing by removing said impeller and disengaging said bearing cartridge from said casing thereby permitting said bearing cartridge to be slid off said drive shaft in an axial direction.

16. The vertical turbine pump as recited in claim 15, wherein an only active element removed to allow removal of said bearing

B²
B³
is said impeller, and wherein active element refers to an element that is actively rotated or otherwise actively moved by said drive shaft when the vertical turbine pump is on.

17. The vertical turbine pump as recited in claim 15, wherein said bearing cartridge is further separably fastenable within said diffuser core.

19. The vertical turbine pump as recited in claim 15, wherein said bearing cartridge includes an engagement structure integral thereon and said diffuser core includes a reciprocal engagement structure therein for receiving the engagement structure of said bearing cartridge.

Sub B³ 7
20. An apparatus for facilitating servicing of a bearing from an upstream end of a vertical turbine pump incorporating a pump assembly including a casing, a diffuser core disposed in the casing, a drive shaft extending through the diffuser core, and a rotary impeller fastened to an upstream end of the drive shaft, the apparatus comprising:

a bearing cartridge including an elongated housing having a bearing disposed therein,

said bearing cartridge separably fastened [within] to the casing,

said bearing surrounding and rotatably supporting the drive shaft,

B3
AF
said bearing cartridge being removable from an upstream end of the casing by removing the impeller and disengaging said bearing cartridge from the casing thereby permitting said bearing cartridge to be slid off the drive shaft in an axial direction.

21. The apparatus as recited in claim 20, wherein an only active element removed to allow removal of said bearing cartridge is the impeller, and wherein active element refers to an element that is actively rotated or otherwise actively moved by the drive shaft when the vertical turbine pump is on.

22. The apparatus as recited in claim 20, wherein said bearing cartridge is further separably fastenable to the diffuser core.

AS
24. The apparatus as recited in claim 20, wherein said bearing cartridge includes an engagement structure integral therein and said diffuser core includes a reciprocal engagement structure thereon for receiving the engagement structure of said bearing cartridge.

Please add the following new claims:

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--25. The vertical turbine pump as recited in claim 15, wherein said bearing is a sleeve-type bearing.